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10/675,232

09/29/2003

Mark Bodner

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9852

20995

7590

06/24/2010

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EXAMINER

YIP, JACK

ART UNIT

PAPER NUMBER

3715

NOTIFICATION DATE

DELIVERY MODE

06/24/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/675,232	Applicant(s) BODNER ET AL.	
	Examiner JACK YIP	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/8/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

1. In response to the amendment filed 9/10/2010; claims 1 - 34 are pending.

Claim Objections

2. Claim 18 is objected to because of the following informalities:

Re claim 18: a period is missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 19 - 23 are rejected under USC 101 for being directed to non-statutory subject matter.** In order for a claimed process to be considered statutory it must be: (1) tied to a particular machine or apparatus, or (2) transform a particular article into a different state or thing. Applicant merely alleges the method is performed by the method is performed by one or more computing devices. **The use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility; the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity; and the transformation must be central to the purpose of the claimed process.** The method steps or acts have not positively tied to a statutory products or things to accomplish such steps or acts. Therefore, the added limitation has not satisfied 101 statutory requirements.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 - 3, 5, 9 - 10 and 28 - 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Donahue (US 2003/0039948 A1).

Re claims 1, :

[Claim 1] Donahue discloses a computerized system for analyzing student performance data and providing feedback based on the student performance data (Donahue, Abstract), the system comprising:

a computer network interface module configured to receive student performance data and transmit recommendation data via a computer network (Donahue, [0025], [0054]; [0032], “feedback”);

a data acquisition module configured to receive the student performance data from the computer network interface module and reformat the student performance data (Donahue, [0059], [0075], “user's profile”);

a performance analysis module configured to receive the reformatted student performance data from the data acquisition module and generate analysis data by analyzing the reformatted student performance data (Donahue, [0059], fig 1, “ASSESSMENT ANALYSIS”); and

a feedback generation module configured to receive the analysis data from the performance analysis module and generate the recommendation data based on the analysis data (Donahue, [0047]), wherein the computer network interface module receives the recommendation data from the feedback generation module and transmits the recommendation data onto the computer network to a school official (Donahue, [0059] - [0062], [0075]), wherein the recommendation data comprises a plurality of courses of action (Donahue, [0026] - [0029], “A plurality of lesson elements make up a lesson or lesson plans”; i.e. [0026], “lesson may include lesson elements including (i) learning how to pronounce the sound that make ... (ii) pronouncing

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similar sounding words... (iii) identifying the correct...”).

Re claims 2 - 3:

The system of Claim 1, wherein the student performance data indicates a source of the data, wherein the data source is a school, a teacher or a student (Donahue, [0035] - [0045], [0059] - [0060]).

Re claim 5:

The system of Claim 1, wherein the student performance data comprises a score achieved by the student on a performance evaluation, and wherein the performance evaluation is a game, a lesson, a quiz or a test (Donahue, [0055]).

Re claim 9:

The system of Claim 1, wherein the analysis data comprises a learning curve (Donahue, [0049])

Re claim 10:

The system of Claim 1, wherein the computer network is the Internet (Donahue, [0025]).

Re claim 28:

The system of Claim 1, wherein data the plurality of courses of action comprises an optional course of action (Donahue, [0062]).

Re claim 29:

The system of Claim 1, wherein data the plurality of courses of action comprises a corrective course of action (Donahue, [0062]).

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Donahue (US 2003/0039948 A1).

Re claim 6:

Donahue does not specifically disclose the performance data indicating a student, teacher, or school that is the source of the test data, wherein the data is encrypted. Examiner takes OFFICIAL NOTICE that encrypting data is old and well known in the art. Therefore, in view of the official notice, it would have been obvious to one of ordinary skill in the art at the time the invention was made to encrypt the data, thereby providing a security feature to protect the data.

9. Claims 4, 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donahue (US 2003/0039948 A1) in view of Bejar et al. (US 6,526,258).

Re claim 4:

Donahue does not disclose the student performance data comprises indexing the data with codes that have been pre-assigned to the school, teacher or student. However, Bejar teaches indexing data with codes (Bejar, fig 3, figs 8-9). Therefore, in view of Bejar, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system described in Donahue, by providing the indexing data as taught by Bejar to provide a shorthand notation that saves time and space.

Re claims 11 - 12:

Donahue discloses analyzing stored data in a database and generating remedial recommendations based on learning problems (Donahue, [0063]). But Donahue does not

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specifically disclose a relational database. However, Bejar discloses the use of a relational database for analyzing responses of test questions (Bejar, Col. 2, Line 44-Col. 3, Line 17).

Therefore, in view of Bejar, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system described in Donahue, by providing the relational database as taught by Bejar to provide a detailed, organized, database from which a meaningful assessment can be made.

Regarding the limitations of determining one or more universals of learning, note that the manner of operating the system does not differentiate the system from the prior art unless there results a structural difference that would patentably distinguish the systems.

10. Claims 7 - 8, 13 - 18, 30 - 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donahue (US 2003/0039948) in view of UCI (Today@UCI: Press Release: "Piano and Computer Training...").

Re claims 7 - 8:

Donahue discloses the use of data representing the progress of consecutive lessons (Donahue, [0046] - [0047]). Donahue does not specifically disclose a spatial temporal math video game. However, UCI discloses that spatial temporal math video games are known to improve math skills in children. Therefore, in view of UCI, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system described in Donahue, by providing the spatial temporal performance evaluation as taught by UCI to boost children's ability to manipulate shapes in their mind.

Re claims 13 - 15, 17:

[Claim 13] A computerized system for analyzing student performance data and providing feedback based on the student performance data (Donahue, Abstract), the system comprising:

a student computer system configured to administer performance evaluation and record student response data (Donahue, [0025], [0054]; [0032], "feedback");

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an education module configured to receive the student response data from the student system and generate student performance data indicative of the level of the student's mastery of the subject matter of the performance evaluation (Donahue, [0059], fig 1, "ASSESSMENT ANALYSIS");

an analysis and feedback module configured to receive the student performance data from the education module and generate feedback data by performing an analysis of the student performance data (Donahue, [0047]); and

a school official computer system configured to receive the feedback data from the analysis and feedback module (Donahue, [0059] - [0062], [0075]), wherein the feedback data comprises recommendations to a school official for enhancing student performance on subsequent performance evaluations, wherein the recommendations comprise a plurality of courses of action (Donahue, [0026] - [0029], "A plurality of lesson elements make up a lesson or lesson plans"; i.e. [0026], "lesson may include lesson elements including (i) learning how to pronounce the sound that make ... (ii) pronouncing similar sounding words... (iii) identifying the correct...").

[Claim 14] The system of Claim 13, wherein the performance evaluation is a game, a lesson, a quiz, or a test (Donahue, [0034]).

[Claim 17] The system of Claim 13, wherein the student performance data comprises a score achieved by the student on a performance evaluation, and wherein the performance evaluation is a game, a lesson, a quiz or a test (Donahue, [0034]).

[Claims 13, 15] Donahue does not disclose a spatial temporal performance evaluation. However, UCI discloses that spatial temporal math video games are known to improve math skills in children. Therefore, in view of UCI, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system described in Donahue, by providing the spatial

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temporal performance evaluation as taught by UCI to boost children's ability to manipulate shapes in their mind.

Re claim 16:

The system of Claim 13, wherein the student performance data indicates a source of the data (Danohue, [0035] - [0045], [0059] - [0060]).

Re claim 18:

Donahue does not specifically disclose the performance data indicating a student, teacher, or school that is the source of the test data, wherein the data is encrypted. Examiner takes OFFICIAL NOTICE that encrypting data is old and well known in the art. Therefore, in view of the official notice, it would have been obvious to one of ordinary skill in the art at the time the invention was made to encrypt the data, thereby providing a security feature to protect the data.

Re Claim 31:

Donahue discloses the recommendation data including an optional course of action (Danohue, [0062]).

Re Claim 32:

Donahue discloses the recommendation data including a corrective course of action (Danohue, [0062]).

Re Claims 30, 33:

Donahue discloses that actions may include remedial elements (Danohue, [0033]). However, Donahue does not specifically disclose repeating a level of a game. UCI discloses that spatial temporal math video games are known to improve math skills in children. Therefore, in view of UCI, it would have been obvious to one of ordinary skill in the art at the time the invention was made to repeating a level of a game, thereby improving math skills.

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Re claim 34:

Donahue discloses the education module is further configured to generate student performance data after student response data received (Donahue, [0059], fig 1, "ASSESSMENT ANALYSIS").

11. Claims 19 - 20, 24 - 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donahue (US 2003/00309948) in view of Thomas (US 6,514,084).

Re Claims 19-20 and 24-25:

Donahue discloses a method of analyzing successive performances by a student for a computerized quiz and providing feedback based on the performances, the method comprising: determining whether a student score is above a threshold passing score to identify that the student has achieved a passing score on a quiz (Donahue, [0055]), comparing the passing score of the student to at least one score obtained from at least one subsequent quiz (Donahue, [0061]), determining whether the student is authorized to progress to a next task of a curriculum or whether the student needs assistance from an instructor based on the comparison (Donahue, [0061] - [0062]), analyzing the passing score of the student and the at least one subsequent quiz score to generate a learning curve (Donahue, [0049]), wherein the method is performed by one or more computing device (Donahue, Abstract). Donahue additionally discloses providing feedback that a student should continue the quiz and/or be given extra attention if the student fails to pass a specific threshold after attempting a quiz a predetermined number of times (Donahue, [0057] - [0058]), wherein the method is performed by one or more computing devices (Donahue, [0009]). Donahue also discloses the invention embodied on a computer readable storage medium (as per claims 24-25; Donahue, [0010]). Thomas discloses using performance data to generate a best fit curve and extrapolating the student's performance trend to predict future performance data, comparing the best fit curve to a target performance level, and determining when the student's performance may reach a threshold passing score and target performance level (Thomas, Figs. 5A-5C; Col. 7, Line 57-Col. 8, Line 30). In view of Thomas, it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate and extrapolate a best fit

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curve, thereby providing the student will a visual indication of his/her progress to preemptively determine if a progress goal will not be met in time.

12. Claims 21 - 22, 26 - 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donahue (US 2003/0039948) and Thomas (US 6,514,084), as applied to claims 19 and 24 above, and further in view of Mizume et al. (US 2004/0033475).

Re Claims 21 and 26:

Donahue discloses comparing quiz scores to previous quiz scores as discussed above. However, Donahue does not specifically disclose comparing the quiz scores against the number of times the quiz is taken for the more recent day. Thomas discloses comparing the quiz scores against the number of times the quiz is taken for all days the quiz is taken (Thomas, Fig. 5C). Mizuma et al. disclose that progress reports showing daily reports (Mizuma, [0066]). Therefore, in view of Thomas and Mizume, it would have been obvious to one of ordinary skill in the art at the time the invention was made to analyze the scores for the most recent day, thereby providing a detailed data to analyze for a specific part of the full performance history.

Re claims 22 and 27:

Donahue discloses comparing quiz scores to previous quiz scores as discussed above. However, Donahue does not specifically disclose comparing the quiz scores against the number of times the quiz is taken for all days the quiz is taken. Thomas discloses comparing the quiz scores against the number of times the quiz is taken for all days the quiz is taken (Thomas, Fig. 5C). In view of Thomas, it would have been obvious to one of ordinary skill in the art at the time the invention was made to compare the quiz scores against the number of times the quiz is taken for all days, thereby providing a complete history of data to analyze.

13. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Donahue (US 2003/0039948) in view of Thomas (US Patent No. 6,514,084), UCI (Today@UCI: Press Release: "Piano and Computer Training..."), and Calhoun et al. (US 2003/0059759).

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Re Claim 23:

Donahue discloses determining a concept to be taught to a student and formulating and administering a basic test of the concept to the student (Donahue, [0049]), wherein the concept may include mathematical concepts (Donahue, [0104]), testing the concept to obtain a progress curve of student scores (Donahue, [0049], [0055]), determining successful learning and retention of the concept (Donahue, [0063]), administering a diagnostic quiz of the concept to the student (Donahue, [0053]), determining adjustments and redesigning the system and lesson elements based on a comparison of the history of results from the assessment components (Donahue, [0084] - [0086], [0097] - [0098]), and integrating the system and lessons into an educational curriculum (Donahue, Abstract), wherein the method is performed by one or more computing devices (Donahue, [0009]). However, Donahue does not specifically disclose a spatial temporal test, using games of the mathematical concepts, using the progress curve to determine learning and retention of the concept, determining if the game score is commensurate with the test score, and determining if the game score is commensurate with the diagnostic quiz score.

UCI teaches that spatial temporal math video games are known to improve math skills in children. In view of UCI, It would have been obvious to one of ordinary skill in the art at the time the invention was made to include spatial temporal math video games, thereby providing an effective method to learn mathematical concepts.

Thomas teaches that progress curves may be used to determine successful learning and retention of a concept (Thomas, Col. 7, Lines 57-Col. 8, Line 5). In view of Thomas, it would have been obvious to use analyze the progress curve to determine successful learning and retention of the mathematical concept, thus providing a graphically intuitive method of determining a student's history and progress in the learning the mathematical concept.

Calhoun et al. teach that initial testing may be performed to gauge an individual's abilities, followed by comparing the individual's progress to determine a correlation (Calhoun, [0072] -

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[0076]). In view of Calhoun, it would have been obvious to use the comparisons of the assessment components to determine if the various scores are commensurate, thus achieving the predictable result of determining if the student is benefiting from the lesson programs.

Response to Arguments

14. Applicant's arguments filed 9/10/2010 have been fully considered but they are not persuasive.

Re claim 1:

15. Applicant states "submits the mere listing of "a subset of lesson elements" does not constitute providing a plurality of courses of action. Nor does the teacher's ability to "modify the lesson plan" constitute providing a plurality of courses of action as Applicant' claim. According to MPEP 2111 [R-5], during patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." The Federal Circuit's en banc decision in Phillips v. AWH Corp., 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) expressly recognized that the USPTO employs the "broadest reasonable interpretation" standard. Donahue states (Donahue, [0026] - [0029]) "A plurality of lesson elements make up a lesson or lesson plans ... lesson may include lesson elements including (i) learning how to pronounce the sound that make ... (ii) pronouncing similar sounding words... (iii) identifying the correct..." - **a plurality of courses of action** (i, ii, iii...)).

Re claims 19, 24:

16. Applicant further states "Donahue allegedly discloses is not the same as "determining whether a student needs assistance from an instructor." Applicant respectfully submits that the assistance Donahue allegedly discloses is not the same as "determining whether a student needs assistance from an instructor." To achieve Donahue's objective of reducing "individualized teacher/student interactions", Donahue would necessarily disfavor Applicant's claimed assistance. As one example, Applicant discloses "assistance or additional instruction can be provided to the student on the spot." Specification as filed at p.2, 11. 19-20. Applicant respectfully

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submits that Thomas does not teach or suggest the feature. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "individualized teacher/student interaction") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Donahue further states (Donahue, [0009]) "...the objectives of the present invention to provide a tutorial system which presents the user with lessons unique and customized to meet his or her particular needs, which accounts for profile or background information regarding the user as well as the user's performance with prior lessons to formulate new lessons, unique for that user, which assesses the user's mastery of the unique assembled lessons and assembles further lessons to reinforce areas in which the user is experiencing difficulty, which can be provided over a computer or telecommunications network, and, which **permits interaction between users and/or teachers to progress through lessons together.**" (individualized teacher/student interaction)

Re claim 23:

17. Applicant further states "Donahue fails to disclose modifying the individual "lesson elements" but rather only discloses modifying the "curricular hierarchy" of lesson elements presented. The examiner respectfully submits Donahue's adjustment of individual "lesson element" is replacement of individual "lesson element" in the "lesson plan", which meets the limitation "determining adjustments to the diagnostic quiz based on the comparison of the game score..." Applicant further states "Calhoun would fail to distinguish whether the selected "appropriate tests" were deficient or if the therapy was deficient. The examiner respectfully submits that the claims in the instant applicant do not distinguish whether the selected "appropriate tests" were deficient or if the learning program (therapy) was deficient.

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Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACK YIP whose telephone number is (571)270-5048. The examiner can normally be reached on Monday - Friday 9:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571)272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. Y./
Examiner, Art Unit 3715

/XUAN M. THAI/
Supervisory Patent Examiner, Art Unit 3715